

Described are osteogenic paste compositions with enhanced osteoinductive properties for use in bone repair. Compositions comprising a quickly resorbable paste carrier, a more slowly resorbed mineral matrix, and Bone Morphogenetic Protein (BMP) or other osteogenic factor are described which enable increased osteoinductive activity while retaining a reliable scaffold for the formation of new bone at the implant site. Methods for making and methods for therapeutic use of the compositions are also disclosed.